WHAT IS CLAIMED IS:

1. A system for reducing tilt effects in a radio frequency (RF) attenuator comprising:

an RF attenuator including at least one series diode, and at least one shunt branch having at least one shunt diode, said shunt branch being electrically coupled to said series diode; and

a parallel resonant circuit electrically coupled to each of said at least one shunt branch, wherein said parallel resonant circuit is configured to compensate for a parasitic reactance in said RF attenuator.

2. The system of claim 1, wherein said at least one series diode and said at least one shunt diode comprise positive-intrinsic-negative (PIN) diodes.

3. The system of claim 2, further comprising:

a shunt bias input electrically coupled to said at least one shunt branch, wherein said shunt bias input is configured to route a first direct current (DC) bias current to said at least one shunt diode; and

a series bias input electrically coupled to said at least one series diode, wherein said series bias input is configured to route a second DC bias to said at least one series diode;

wherein said first and said second DC bias are configured to establish an impedance of said at least one shunt diode and said at least one series diode.

4. The system of claim 3, wherein said parallel resonant circuit is resonant at a frequency higher than a highest signal frequency received by said RF attenuator.

5. The system of claim 3, wherein an impedance of said parallel resonant circuit increases with an increase of a received RF signal frequency.

6. The system of claim 3, wherein said parallel resonant circuit is coupled in series with said at least one shunt branch from a received RF signal perspective.

7. The system of claim 3, wherein said parallel resonant circuit comprises an inductor, and a capacitor electrically coupled in parallel.

8. The system of claim 7, wherein said parallel resonant circuit further comprises a resistor electrically coupled in parallel with said inductor and said capacitor, wherein said resistor is configured to limit a maximum impedance of said parallel resonant circuit.

9. The system of claim 8, wherein said RF attenuator further comprises:

an RF signal input;

an RF signal output;

a first and a second series diode coupled in series with said RF signal input and said RF signal output;

a first shunt branch electrically coupled to said RF attenuator between said RF signal input and said first and second series diodes, said first shunt branch including a plurality of said PIN diodes;

a second shunt branch electrically coupled to said RF attenuator between said RF signal output and said first and second series diodes, said second shunt branch including a plurality of said PIN diodes; and

a first parallel resonant circuit electrically coupled in series to said first shunt branch and a second parallel resonant circuit electrically coupled in series to said second shunt branch.

10. The system of claim 9, further comprising a decoupling component electrically coupled to said series bias input, wherein said decoupling component is configured to remove a residual RF energy from the said series bias input.

11. The system of claim 10, further comprising a decoupling component electrically coupled to said shunt bias input, wherein said decoupling component is configured to remove a residual RF energy from said shunt bias input.

12. A method for reducing a tilt effect in an RF attenuator comprising:

providing an RF attenuator including at least one series diode and at least one shunt branch having at least one shunt diode, said shunt branch being electrically coupled to said series diode; and

electrically coupling a parallel resonant circuit to each of said at least one shunt branch, wherein said parallel resonant circuit is configured to compensate for a parasitic reactance in said RF attenuator.

13. The method of claim 12, further comprising biasing said at least one series diode and said at least one shunt diode with a first and a second DC bias.

14. The method of claim 12, further comprising:

receiving an RF signal;

attenuating said RF signal with said RF attenuator; and

transmitting said attenuated signal.

15. An RF attenuator comprising:

an RF signal input;

an RF signal output;

a first and a second series diode coupled in series with said RF signal input and said RF signal output;

a first shunt branch electrically coupled to said RF attenuator between said RF signal input and said first and second series diodes, said first shunt branch including a plurality of shunt diodes;

a second shunt branch electrically coupled to said RF attenuator between said RF signal output and said first and second series diodes, said second shunt branch including a plurality of shunt diodes; and

a first parallel resonant circuit electrically coupled in series to said first shunt branch and a second parallel resonant circuit electrically coupled in series to said second shunt branch.

16. The RF attenuator of claim 15, wherein said first and second series diodes and said plurality of shunt diodes comprise positive-intrinsic-negative (PIN) diodes.

17. The RF attenuator of claim 16, further comprising:

a shunt bias input electrically coupled to said first and second shunt branch, wherein said shunt bias input is configured to route a first direct current (DC) bias current to said plurality of shunt diodes; and

a series bias input electrically coupled to said first and second series diodes, wherein said series bias input is configured to route a second DC bias to said first and second series diodes;

wherein said first and said second DC bias are configured to establish an impedance of said plurality of shunt diodes and said first and second series diodes.

18. The RF attenuator of claim 17, wherein said first and second parallel resonant circuits are resonant at a frequency higher than a highest signal frequency received by said RF attenuator.

19. The RF attenuator of claim 17, wherein an impedance of said first and second parallel resonant circuits increases with an increase of a received RF signal frequency.

20. The RF attenuator of claim 17, wherein said first and second parallel resonant circuits are coupled in series with said first and second shunt branch from a received RF signal perspective.

21. The RF attenuator of claim 17, wherein said first and said second parallel resonant circuits each comprise an inductor, and a capacitor electrically coupled in parallel.

22. The system of claim 21, wherein said first and said second parallel resonant circuits each further comprise a resistor electrically coupled in parallel with said inductor and said capacitor, wherein said resistor is configured to limit a maximum impedance of each of said parallel resonant circuits.

23. A signal transmitter comprising:

an RF input;

a PIN attenuator with tilt correction; and

a signal output;

wherein said PIN attenuator includes an RF signal input, an RF signal output, a first and a second series diode coupled in series with said RF signal input and said RF signal output, a first shunt branch electrically coupled to said RF attenuator between said RF signal input and said first and second series diodes, said first shunt branch including a plurality of shunt diodes, a second shunt branch electrically coupled to said RF attenuator between said RF signal output and said first and second series diodes, said second shunt branch including a plurality of shunt diodes, and a first parallel resonant circuit electrically coupled in series to said first shunt branch and a second parallel resonant circuit electrically coupled in series to said second shunt branch.

24. The signal transmitter of claim 23, wherein:

said RF signal input is communicatively coupled to said signal output;

said signal output comprising a signal modulation device.

25. The signal transmitter of claim 24, wherein said signal modulation device comprises a laser, said laser being configured to optically modulate a received RF signal into an optical output.